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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,170	05/04/2001	Lyndsay Williams	2730	9681

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,170

Applicant(s)

WILLIAMS ET AL.

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is responsive to Amendment filed on 01/19/05.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 3, 8, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Monroe (Patent No.: US 6,633,282).

Regarding claim 1, referring to Figs. 1-3, Willan Monroe teaches a computer system, comprising: a writing instrument (i.e., pen 10) that generates, using a ballistic information generator (24, 28), movement information including acceleration information from a user's handwriting and a conversion component (32) that utilizes the acceleration information to generate line thickness information (i.e., bold and thin stroke) (abstract, col. 3, line 38 to col. 4, line 22).

Regarding claim 2, Monroe further teaches the writing instrument is a pen (col. 3, lines 38-41).

Regarding claim 3, Monroe further teaches an accelerometer (i.e., motion sensor 24, 28) configured to generate the acceleration information (i.e., motion signals) (col. 3, line 38 to col. 4, line 22).

Regarding claims 8 and 17, Monroe further teaches the accelerometer is configured to generate tilt information (col. 3, lines 61-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 8-14, and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willan (Patent No.: US 5,239,292).

Regarding claim 1, referring to Figs. 2-4, Willan teaches a computer system (i.e., graphic system), comprising: a writing instrument (i.e., pen) that generates, using a ballistic information generator (col. 1, lines 54-67), movement information including acceleration information (acceleration/velocity) from a user's handwriting and utilizing the acceleration information to generate line thickness information (i.e., width of the pattern) (col. 3, line 13 to col. 4, line 16, col. 4, line 45 to col. 5, line 36, and col. 8, lines 3-6). Although Willan does not specifically teaches a conversion component that utilizes the acceleration information to generate line thickness information, however Willan teaches the line's width which increase with the velocity or the shape of brush changes with the acceleration (col. 4, line 60 to col. 5, line 16). Accordingly, Willan teaches a conversion component that utilizes the acceleration information to generate line thickness information.

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Regarding claim 2, Willan further teaches the writing instrument is a pen (col. 3, lines 13-16).

Regarding claim 3, Willan further teaches an accelerometer (56) configured to generate the acceleration information (col. 3, lines 35-47).

Regarding claims 5 and 14, Willan differs from claim 5 and 14 in that he does not specifically teach conversion component is located remote from the writing instrument and transmitting the digital data to the conversion component. Willan teaches a computer can detect the changes in position of the input device relative to a surface (col. 3, lines 35-47 and col. 4, line 60 to col. 5, line 16). Accordingly, Willan teaches inherent conversion component in computer to detect the movement of the pen and convert to width of pattern.

Regarding claims 8 and 17, Willan further teaches the accelerometer is configured to generate tilt information (col. 2, lines 41-50).

Regarding claims 9 and 18, referring to Figs. 2-4, Willan teaches a computer system (i.e., graphic system), comprising: a writing instrument (i.e., pen) that generates movement information including acceleration information (acceleration/velocity) from a user's handwriting and utilizes the acceleration information to generate line thickness information (i.e., width of the pattern) based upon spacing of plots in a map of a plot (Fig. 4) of the movement information (col. 3, line 13 to col. 4, line 16 and col. 4, line 45 to col. 5, line 36). Although Willan does not specifically teach a conversion component. However Willan teaches the computer detect the velocity or the shape of brush changes with the acceleration to generate the line's width (col. 4, line 60 to col. 5, line 16). Accordingly, Willan teaches a conversion component that utilizes the acceleration information to generate line thickness information.

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Regarding claims 10-11 and 19-20, Willan further teaches the thickness information is based upon the samples/unit distance of the plots (Fig. 4, col. 4, line 45 to col. 5, line 36).

Regarding claims 12, 13, 21, and 22, Willan further teaches the thickness information increases a thickness component as the wavelengths increase (col. 1, lines 60-64, col. 4, line 45 to col. 5, line 36).

6. Claims 4, 6, 7, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willan (Patent No.: US 5,239,292) in view of O'Connor et al. (Patent No.: US 6,188,392).

Regarding claim 4, Willan differs from claim 4 in that he does not specifically teach the accelerometer generates analog movement information, and an analog-to-digital converter for converting the analog movement information to digital data. However, referring to Fig. 1, O'Connor teaches accelerometer generates analog movement information, and an analog-to-digital converter (116) for converting the analog movement information to digital data (col. 5, lines 29-45). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the analog-to-digital converter as taught by O'Connor in the system of Willan in order to provide a digital output for the device.

Regarding claims 6 and 15, the combination of Willan and O'Connor teaches the digital data is transmitted via a wireless connection (col. 6, lines 3-22 of O'Connor).

Regarding claims 7 and 16, the combination of Willan and O'Connor further teaches the digital data is transmitted via a hardwired connection (col. 6, lines 23-39 of O'Connor).

7. Claims 4, 6, 7, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe (Patent No.: US 6,633,282) in view of O'Connor et al. (Patent No.: US 6,188,392).

Regarding claim 4, Monroe differs from claim 4 in that he does not specifically teach the accelerometer generates analog movement information, and an analog-to-digital converter for converting the analog movement information to digital data. However, referring to Fig. 1, O'Connor teaches accelerometer generates analog movement information, and an analog-to-digital converter (116) for converting the analog movement information to digital data (col. 5, lines 29-45). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the analog-to-digital converter as taught by O'Connor in the system of Monroe in order to provide a digital output for the device.

Regarding claims 6 and 15, the combination of Monroe and O'Connor teaches the digital data is transmitted via a wireless connection (col. 6, lines 3-22 of O'Connor).

Regarding claims 7 and 16, the combination of Monroe and O'Connor further teaches the digital data is transmitted via a hardwired connection (col. 6, lines 23-39 of O'Connor).

Response to Arguments

8. Applicants' arguments filed 01/19/05, have been fully considered but they are not persuasive because as follows:

In response to Applicants' argument filed "the system and technique disclosed by Monroe is significantly different from applicants' and uses a pressure sensor to generate thickness information rather than acceleration information." Examiner respectfully disagrees, referring to Figs. 1 and 2, Monroe teaches the sensors 24 and 28 can monitor the movements of the ball and the orientation of the pen relative to the surface. The sensors 24 and 28 "watch" and transmit the pen movements, by using the orientation sensor, the style of stroke may be monitored, both the "thin" and "thick" lines strokes can be monitored by sensing the orientation

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of the point about the center axis of the pen (col. 3, line 61 to col. 4, line 22). Monroe uses a pressure sensor to generate thickness information in an alternative sensor system as shown in Fig. 3 which is differs embodiment of the method of Figs. 1 and 2. Applicant argued that “the system of Willan necessarily requires a pressure sensor in order to measure pressure at the point of an input device and does not teach or even suggest generating movement information including acceleration information to determine line thickness.” However, Willan teaches a means for displaying patterns which follow the movement of the pen, wherein means are provided for determining at least one differential derivation (the first determined derivative X may be velocity, the second determined derivative Y acceleration, or the third determined derivative Z) is used to control the shape and width of the displayed pattern (col. 1, lines 51-66, col. 3, lines 44-46, 57-58 and col. 7, lines 29-35). Therefore, the system of Willan not necessarily requires a pressure sensor in order to measure pressure (determined derivative Z) at the point of an input device. Applicant argued that in the system of Willan “the writing surface is simulated to be tilted, but the system is unable to determine if the input device itself tilted. However, Willan teaches a means (one of the determined derivative) for detecting changes in the position of the input device relative to a surface (col. 1, lines 51-52); accordingly the system of Willan detects the title information of the input device. Therefore the ground of the rejection is maintained.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696.

The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JNguyen
06/10/05


REGINA LIANG
PRIMARY EXAMINER